INDUSTRY GROWTH

By Julie Berry

The Murray family is completing a step-wise expansion that will take Murcrest Dairy from a medium to large CAFO

Step-wise conversion to a large CAFO

Murcrest Dairy in Copenhagen, NY recently broke ground on the last phase in a stepwise expansion that has taken them from 350 cows in 2004, to 690 cows in 2006, and finally to 1,000 cows by summer 2013.

The step-wise expansion has allowed management to adapt to changes and for the farm to be gradually converted to a medium CAFO in a new facility in the first phase and then a large CAFO in the second phase.

"It's absolutely a good idea with management to have growth step by step," said owner Lynn Murray. Since 2006 the Murrays have hired five additional employees, including a herdsmen, crop and equipment laborers, and milkers.

The Murray's chose to build new because they could not expand in the existing facility, and the milking parlor was "worn out." Peggy and Lynn's son Mark was also considering a return to the family business, but there was no pressure for him to do so, Lynn said.

"We couldn't grow any more. We were a mature business at that size and had the opportunity to do more. It mostly seemed a logical progression for the best future of the farm. Either way it was the right thing to expand," he said. "We were not big enough to cash flow the equipment, and were too big not to. We had enough land owned or rented to support growth. And we grow our own forage and high moisture corn."

Expansion also helps the Murray's pay for environmental compliance costs.

"We will build the barn and bunk silo this summer to complete CAFO compliance to be a large CAFO," Lynn said. "More cows help pay for the CAFO regulations. It helps spread out fixed costs over more units."

The Murrays will have more record keeping once they pass the 700 cow mark to become a large CAFO, but the physical requirements are the same, Lynn said. The family wanted the farm in one location, and selected the current site from an aerial view, and through identification of distance to haul manure to fields.

"We looked at the facility at 350 cows. There was no way of making a fairly large expansion in the existing facility," Lynn said. "1,200 to 1,500 cows are as much as we would want to do. To expand beyond that we would have to move to another site."

Planning for the expansion began in 2004. "We built and moved in December 2006," Lynn said. They bought a herd from Albany for the initial expansion. With conversion to a group feeding system, the next step-wise growth will come from internal herd growth.

Mark's wife Sarah came on board as a part-time calf manager for the group housing. The calf barn

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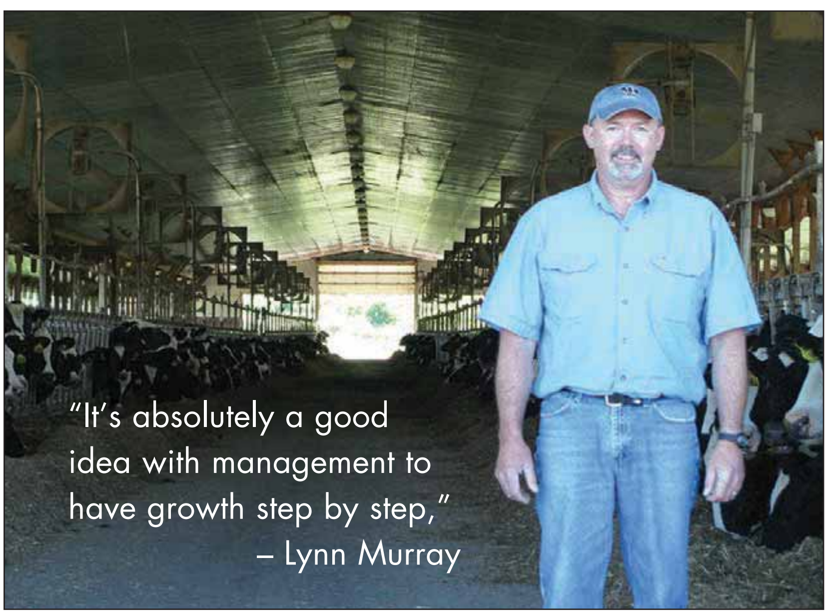

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The Conclusion

Expansion from 190 to 290 cows causes a significant shock to the finances of the hypothetical farm. Top line revenue grows from $845,278 in 2011 to $1,235,618 in 2012 and subsequent years. However, expenses grow as well. Most expenses increase proportionally to the expansion. The farm without the NY CAFO expense adds an additional $382,500 in intermediate- and long-term debt. This reduces net worth from 75% to 64% and brings ROA down from 1.7% to 0.5%. Except for year 2, when the farm has a small deficit, however, our farm remains cash positive.

The farmer who complies with NY CAFO regulations has a much greater financial challenge. Top line revenue grows the same as the non-CAFO farm, but expense of $5,000 annually is added for CNMP updates that must be absorbed. Additionally, the farmer must take on $524,500 in new debt to finance both the herd expansion and the CAFO compliance. Net worth declines from 75% to 59%, and ROA becomes negative (0.3%). Cash margin drops from $35,991, before expansion, to ($13,395). With the manure storage eliminated, the farmer would see slightly positive cash margins, making this project possible but risky in a volatile economic environment.

One key factor is that this hypothetical farm, as with most dairy farms in the Northeast, already has substantial debt. Without the debt service from its existing debt, the case farmer's expansion looks a lot better. However, only a minority of dairy farmers in the region have little to no debt. With the debt load of an average farm, the future cash flow is insufficient to cover the additional debt service of the CAFO-compliant expansion. Note also that the Dairy Farm Summary used 'average' farm data. Half of the farmers will fare worse than this example indicates.

Not specifically addressed in this study is the opportunity cost of the CAFO expense. The additional debt and cost of CAFO compliance could keep the study farmer from being able to make land purchases, upgrade equipment to keep up with the needs of a larger herd, maintain cash reserves for an inevitable down year, and forego other potential opportunities or risk management strategies. Further, the use of a six-year average milk price blurs the impact that a low milk price cycle could have. Even without CAFO compliance costs, a stretch of low milk prices would put our study farmer in serious financial jeopardy.

Finally, compliance requires management time and expertise. Many farm owners are unable or unwilling to expand due to the large management needs of maintaining compliance with current CAFO regulations. The farm owner must either do the work themselves, at a size at which they are likely to still have significant operational responsibility, or outsource / hire additional staff to cover it, at an additional expense. In this study, such an expense was not budgeted for. ❐

Step-wise conversion to a large CAFO

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was built in 2008. With the drop in milk prices, concrete was never poured, a milk house wasn't built, and individual pens weren't constructed. This set them up well for the conversion to group housing, and at this point no more changes are planned for the barn, Lynn said. Calves are bedded with shavings and straw, which they like to nestle in during the winter. Air quality and drainage are good.

"Sarah just plain doesn't lose any calves," Lynn said. "Because of the changes we are able to make the growth internally." Internal herd growth is now 13 percent, up from 4 percent before the calves were group-housed.

With the new construction calving pens will be moved into the new barns where the people are.

"Our loss is at night, so we need to put them in a location where the people are," Lynn said.

The new barn will have same head-to-head four rows, with 16 ft curb to curb stalls, layout as was built in the first phase of expansion. Other keys to success include lots of fans and water sprinklers on headlocks. The parlor is a basement design that is expandable. The first 2/3 currently has equipment.

The Murrays traveled to Midwest dairies in Indiana, Wisconsin and Michigan to view what worked on other farms. "We took the best we could find," Lynn said. "We're real happy with it. We think we can make more milk in a four row barn with the feed space. Cows like to be together."

The first phase of expansion probably would have happened quicker, except for low milk prices in 2009, which set the Murrays back.

"We didn't make the progress we had planned, and it took us another year or two," Lynn said. "Everyone in the banking and service industry, including us, prior to that were more willing to take risk."

Protocols were written and put in place before the expansion. "We wanted to make sure everyone was doing as good as we could do before we made the jump."

The future looks bright for making milk in NY because of ample manufacturing capacity, Lynn said. And, he credits the farm's employees, as key to their success.

"Our mission is to create a reasonable living for our valued employees and their families, and hope growth will do that," he said. "Our employees are proud of what they do. We wouldn't be doing an expansion if we weren't so fortunate to have good people doing a fantastic job." ❐